

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended): A fluoroalkylphosphate salt of formula (I)



(I)

wherein

$M^{a+}$  is a monovalent, divalent or trivalent cation selected from lithium, sodium, magnesium, aluminum, nitrosyl, nitryl and organic cations;

a is 1, 2 or 3;

b is 2 for a = 1,

b is 2 for a = 3, and

b is 1 for a = 2;

and, in each case, subscripts n, m, x and y satisfy the following relationships

$$1 \leq n \leq 8,$$

$$0 \leq m \leq 2 \text{ for } n = 1 \text{ or } 2,$$

$$0 \leq m \leq 4 \text{ for } 3 \leq n \leq 8,$$

$$1 \leq x \leq 12,$$

$$0 \leq y \leq 2,$$

where  $R_1$  and  $R_2$  are each independently, fluorine, hydrogen, alkyl having 1 to 8 carbon

atoms, fluoroalkyl having 1 to 8 carbon atoms or perfluoroalkyl having 1 to 8 carbon atoms;  
and

wherein the substituents ( $C_nF_{2n+1-m}H_m$ ) are in each case identical or different.

2. (Cancelled):
3. (Currently Amended): A fluoroalkylphosphate salt according to claim 1 2, wherein cation  $M^{a+}$  is a lithium, or sodium ~~or potassium~~ cation.
4. (Original): A fluoroalkylphosphate salt according to Claim 3, wherein the cation  $M^{a+}$  is a lithium cation.
5. (Original): A fluoroalkylphosphate salt according to Claim 1, wherein the cation  $M^{a+}$  is a magnesium or aluminum cation.
6. (Original): A fluoroalkylphosphate salt according to Claim 1, wherein the cation  $M^{a+}$  is an organic cation
7. (Currently Amended): A fluoroalkylphosphate salt according to Claim 1 6, wherein the cation  $M^{a+}$  is a nitrosyl cation, a nitryl cation or an organic cation selected from the formulae



wherein

$R^7$ , in each case independently, is H,  $C_{1-10}$ -alkyl or A, where one or more H atoms in the  $C_{1-10}$ -alkyl chain may each individually be replaced by fluorine, an aromatic radical which optionally contains one or more heteroatoms, or a cycloalkyl radical which optionally contains one or more heteroatoms, and/or one or more C atoms in the alkyl chain may be each individually replaced by a heteroatom, and

A is an aromatic or cycloaliphatic radical, in each case optionally containing one or more heteroatoms.

8. (Original): A fluoroalkylphosphate salt according to claim 7, wherein A is in each case a 5- or 6-membered aromatic radical which optionally contains nitrogen, sulfur and/or oxygen atoms, or a cycloalkyl radical having 5 or 6 members.

9. (Original): A fluoroalkylphosphate salt according to claim 8, wherein A is phenyl or pyridyl.

10. (Currently Amended): A fluoroalkylphosphate salt according to Claim 1 6, wherein the  $M^{a+}$  is a nitrosyl cation, a nitryl cation or an organic cation selected from the formulae



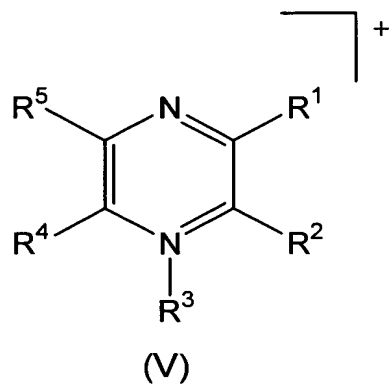
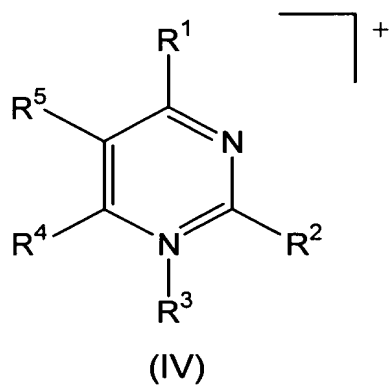
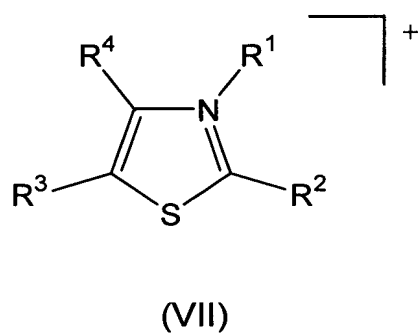
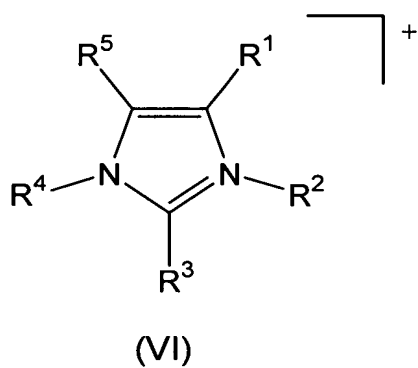
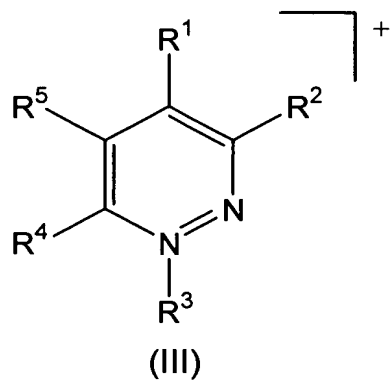
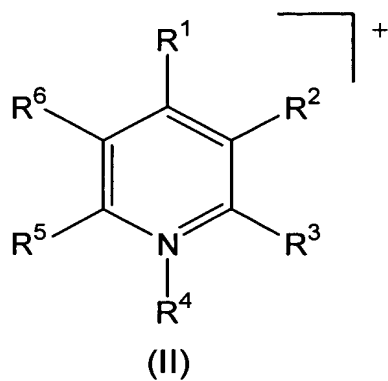
wherein

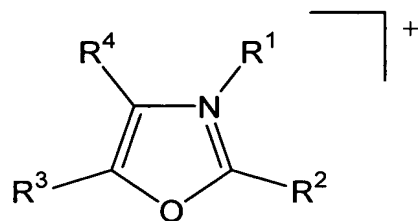
$R^7$  are, in each case, independently, ~~are~~ H,  $C_{1-10}$ -alkyl or A,

where one or more H atoms in the  $C_{1-10}$ -alkyl chain may each individually be replaced by fluorine, a 5- or 6- membered aromatic radical which optionally contains one or more heteroatoms selected from N, O and S, or a 5- or 6- numbered cycloalkyl radical which optionally contains one or more heteroatoms selected from N, O and S, and/or one or more C atoms in the  $C_{1-10}$ -alkyl chain may be each individually replaced by oxygen, and

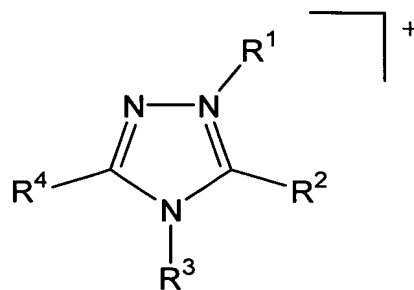
A is an aromatic or cycloaliphatic radical, in each case optionally containing one or more heteroatoms.

11. (Original): A fluoroalkylphosphate salt according to Claim 1, wherein  $M^{a+}$  is a heteroaromatic cation of formulae (II) to (IX)





(VIII)



(IX)

wherein

$R^1$  to  $R^6$  are each independently, H, halogen, or a  $C_{1-8}$ -alkyl radical which is optionally substituted by F, Cl,  $N(C_rF_{(2r+1-s)}H_s)_2$ ,  $O(C_rF_{(2r+1-s)}H_s)$ ,  $SO_2(C_rF_{(2r+1-s)}H_s)$  or  $C_rF_{(2r+1-s)}H_s$ , in which  $1 \leq r \leq 6$  and  $0 \leq s \leq 13$ , and  $2r+1-s \geq 0$ , or one or more adjacent pairs of  $R^1$  to  $R^6$  can together be a  $C_{1-8}$ -alkylene radical which is optionally substituted by F, Cl,  $N(C_rF_{(2r+1-s)}H_s)_2$ ,  $O(C_rF_{(2r+1-s)}H_s)$ ,  $SO_2(C_rF_{(2r+1-s)}H_s)$  or  $C_rF_{(2r+1-s)}H_s$ , in which  $1 \leq r \leq 6$  and  $0 \leq s \leq 13$ , and  $2r+1-s \geq 0$ , where each of  $R^1$  to  $R^6$  cannot be halogens if they are bonded directly to nitrogen.

12. (Currently Amended): A fluoroalkylphosphate salts according to Claim 11 40, wherein  $R^1$  to  $R^6$  are each independently H, fluorine, or a  $C_{1-8}$ -alkyl radical which is optionally substituted by F, Cl,  $N(C_rF_{(2r+1-s)}H_s)_2$ ,  $O(C_rF_{(2r+1-s)}H_s)$ ,  $SO_2(C_rF_{(2r+1-s)}H_s)$  or  $C_rF_{(2r+1-s)}H_s$ , in which  $1 \leq r \leq 6$ , or  $0 \leq s \leq 2r+1$ , and  $2r+1-s \geq 0$ , and where each of  $R^1$  to  $R^6$  cannot be fluorine if they are bonded directly to nitrogen.

13. (Original): A fluoroalkylphosphate salt according to Claim 1, wherein  $1 \leq n \leq 6$ .

14. (Currently Amended): A fluoroalkylphosphate salt according to Claim 13, wherein  $1 \leq n \leq 3$ .  ~~$1 \leq x \leq 4$ .~~

15. (Original): A fluoroalkylphosphate salt according to Claim 1, wherein  $1 \leq x \leq 8$ .

16. (Original): A fluoroalkylphosphate salt according to Claim 15, wherein  $1 \leq x$

≤ 4.

17. (Currently Amended): A fluoroalkylphosphate salt according to ~~Claims~~ Claim 1, wherein m = 0.

18. (Original): A fluoroalkylphosphate salt according to Claim 1, wherein y = 2.

19. (Original): A fluoroalkylphosphate salt according to Claim 1, wherein R<sub>1</sub> and R<sub>2</sub> are each fluorine.

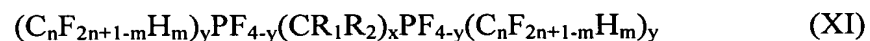
20. (Currently Amended): A fluoroalkylphosphate salt according to Claim 1, wherein said salt is (Li<sup>+</sup>)<sub>2</sub>[(C<sub>2</sub>F<sub>5</sub>)<sub>2</sub>PF<sub>3</sub>(CF<sub>2</sub>)<sub>2</sub>PF<sub>3</sub>(C<sub>2</sub>F<sub>5</sub>)<sub>2</sub>]<sup>(2-)</sup> or (N(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub><sup>+</sup>)<sub>2</sub>[(C<sub>2</sub>F<sub>5</sub>)<sub>2</sub>PF<sub>3</sub>(CF<sub>2</sub>)<sub>2</sub>PF<sub>3</sub>(C<sub>2</sub>F<sub>5</sub>)<sub>2</sub>]<sup>(2-)</sup>.

21. (Original): A process for the preparation of a fluoroalkylphosphate salt according to Claim 1, comprising:  
reacting at least one fluoro-α,ω-bis[(fluoroalkyl)fluorophosphorano]alkane with at least one fluoride salt of the formula (X)



in which (M<sup>a+</sup>) and a are as defined in Claim 1, in solution to obtain a fluoroalkylphosphate salt of the formula (I), and said salt is optionally, purified and/or isolated.

22. (Original): A process according to Claim 21, wherein said at least one fluoro-α,ω-bis[(fluoroalkyl)fluorophosphorano]alkane is a compound of formula (XI)



in which

1 ≤ n ≤ 8, 0 ≤ m ≤ 2 for n = 1 or 2, 0 ≤ m ≤ 4 for 3 ≤ n ≤ 8, 1 ≤ x ≤ 12, 0 ≤ y ≤ 2,  
R<sub>1</sub> and R<sub>2</sub> are each, independently, fluorine, hydrogen, alkyl having 1 to 8 C atoms,  
fluoroalkyl having 1 to 8 C atoms or perfluoroalkyl having 1 to 8 C atoms, and

substituents ( $C_nF_{2n+1-m}H_m$ ) are in each case identical or different.

23. (Original): A process according to Claim 21, wherein the compound of the formula (X) is employed in an excess of up to 10 fold, based on the amount of fluoro-  $\alpha,\omega$  - bis[(fluoroalkyl) fluorophosphorano]alkane(s).

24. (Original): A process according to one of Claim 21, wherein the reaction with the compound of formula (X) is carried out at a temperature of  $-35$  to  $+80^\circ\text{C}$ .

25. (Currently Amended): A process according to one of Claim 21, wherein that the solvent employed is

ethylene carbonate, propylene carbonate, butylene carbonate, dimethyl carbonate, diethyl carbonate, ethyl methyl carbonate, methyl propyl carbonate, methyl formate, ethyl formate, methyl acetate, ethyl acetate, methyl propionate, ethyl propionate, methyl butyrate, ethyl butyrate,  $\gamma$ -butyrolactone, diethyl ether, dimethoxyethane, diethoxyethane, dimethylformamide or dimethylacetamide, dimethyl sulfoxide, dimethyl sulfide, diethyl sulfide propane sulfone, acetonitrile, acrylonitrile, propionitrile, acetone, or an

at least partially fluorinated ~~derivative of any of these solvents~~ ethylene carbonate, propylene carbonate, butylene carbonate, dimethyl carbonate, diethyl carbonate, ethyl methyl carbonate, methyl propyl carbonate, methyl formate, ethyl formate, methyl acetate, ethyl acetate, methyl propionate, ethyl propionate, methyl butyrate, ethyl butyrate,  $\gamma$ -butyrolactone, diethyl ether, dimethoxyethane, diethoxyethane, dimethylformamide or dimethylacetamide, dimethyl sulfoxide, dimethyl sulfide, diethyl sulfide propane sulfone, acetonitrile, acrylonitrile, propionitrile, acetone, or

a mixture of at least two of these solvents ~~and/or fluorinated derivatives of these solvents~~.

26. (Currently Amended): A mixture comprising:

- a) ~~a~~ at least one fluoroalkylphosphate salt according to Claim 1, and
- b) ~~b~~ at least one polymer.

27. (Currently Amended): A mixture according to Claim 26, comprising 5 to 90% by weight of ~~component~~ a) and 95 to 5% by weight of component b), based on the sum of ~~components~~ a) and b).

28. (Currently Amended): A mixture according to claim 26 25, wherein ~~component b~~ b) is a homopolymer or copolymer of acrylonitrile, vinylidene difluoride, methyl methacrylate, tetrahydrofuran, ethylene oxide, siloxane, phosphazene or a mixture of at least two of these homopolymers and/or copolymers.

29. (Original): A mixture according to Claim 28, wherein b) is a homopolymer or copolymer of vinylidene difluoride, acrylonitrile, methyl methacrylate or tetrahydrofuran.

30. (Currently Amended): A mixture according to claim 26 25, wherein said at least one polymer is at least partially crosslinked.

31. (Currently Amended): A mixture according to claim 26 25, wherein said mixture ~~it~~ additionally comprises at least one solvent.

32. (Currently Amended): A mixture according to Claim 31, wherein said solvent is ethylene carbonate, propylene carbonate, butylene carbonate, dimethyl carbonate, diethyl carbonate, ethyl methyl carbonate, methyl propyl carbonate, methyl formate, ethyl formate, methyl acetate, ethyl acetate, methyl propionate, ethyl propionate, methyl butyrate, ethyl butyrate,  $\gamma$ -butyrolactone, diethyl ether, dimethoxyethane, diethoxyethane, dimethylformamide, dimethylacetamide, dimethyl sulfoxide, dimethyl sulfide, diethyl sulfide or propane sulfone, acetonitrile, acrylonitrile, acetone, or ~~an~~

at least partially fluorinated ~~derivative of the any of these solvents~~ ethylene carbonate, propylene carbonate, butylene carbonate, dimethyl carbonate, diethyl carbonate, ethyl methyl carbonate, methyl propyl carbonate, methyl formate, ethyl formate, methyl acetate, ethyl acetate, methyl propionate, ethyl propionate, methyl butyrate, ethyl butyrate,  $\gamma$ -butyrolactone, diethyl ether, dimethoxyethane, diethoxyethane, dimethylformamide, dimethylacetamide, dimethyl sulfoxide, dimethyl sulfide, diethyl sulfide or propane sulfone, acetonitrile, acrylonitrile, acetone, or

a mixture of at least two of these solvents ~~and/or fluorinated derivatives of these solvents~~.

33. (Currently Amended): In an electrolyte, primary battery, secondary battery, capacitor, supercapacitor or galvanic cell, which in each case contains ~~containing~~ at least one



conductive salt, the improvement wherein, in each case, said salt is a salt according to claim 1, ~~optionally in combination with further conductive salts and/or additives.~~

34. (Original): An electrolyte according to Claim 33.

35. (Original): An electrolyte according to Claim 34, wherein the concentration of the fluoroalkylphosphate salt is 0.01 to 3 mol/l.

36. (Original): A primary battery according to Claim 33.

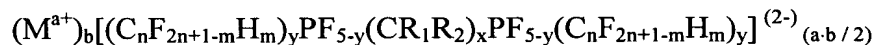
37. (Original): A secondary battery according to Claim 33.

38. (Original): A capacitor according to Claim 33.

39. (Original): A supercapacitor according to Claim 33.

40. (Original): A galvanic cell according to Claim 33.

41. (New): A fluoroalkylphosphate salt of formula (I)



(I)

wherein

$M^{a+}$  is a monovalent, divalent or trivalent cation;

a is 1, 2 or 3;

b is 2 for a = 1,

b is 2 for a = 3, and

b is 1 for a = 2;

and, in each case, subscripts n, m, x and y satisfy the following relationships

$$1 \leq n \leq 8,$$

$$0 \leq m \leq 2 \text{ for } n = 1 \text{ or } 2,$$

$$0 \leq m \leq 4 \text{ for } 3 \leq n \leq 8,$$

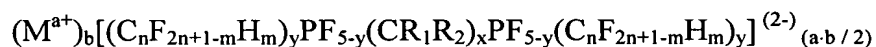
$$1 \leq x \leq 12,$$

$$y = 2,$$

where  $R_1$  and  $R_2$  are each independently, fluorine, hydrogen, alkyl having 1 to 8 carbon atoms, fluoroalkyl having 1 to 8 carbon atoms or perfluoroalkyl having 1 to 8 carbon atoms; and

wherein the substituents  $(C_nF_{2n+1-m}H_m)$  are in each case identical or different.

42. (New): A fluoroalkylphosphate salt of formula (I)



(I)

wherein

$M^{a+}$  is a monovalent, divalent or trivalent cation;

a is 1, 2 or 3;

b is 2 for a = 1,

b is 2 for a = 3, and

b is 1 for a = 2;

and, in each case, subscripts n, m, x and y satisfy the following relationships

$$1 \leq n \leq 8,$$

$$0 \leq m \leq 2 \text{ for } n = 1 \text{ or } 2,$$

$$0 \leq m \leq 4 \text{ for } 3 \leq n \leq 8,$$

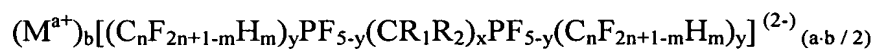
$$1 \leq x \leq 12,$$

$$0 \leq y \leq 2,$$

wherein  $R_1$  and  $R_2$  are each fluorine; and

wherein the substituents  $(C_nF_{2n+1-m}H_m)$  are in each case identical or different.

43. (New): A fluoroalkylphosphate salt of formula (I)



(I)

wherein

$M^{a+}$  is a monovalent, divalent or trivalent cation;

a is 1, 2 or 3;

b is 2 for a = 1,

b is 2 for a = 3, and

b is 1 for a = 2;

and, in each case, subscripts n, m, x and y satisfy the following relationships

$$1 \leq n \leq 8,$$

$$0 \leq m \leq 2 \text{ for } n = 1 \text{ or } 2,$$

$$0 \leq m \leq 4 \text{ for } 3 \leq n \leq 8,$$

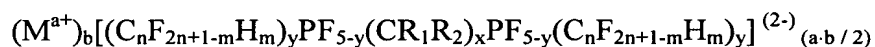
$$2 \leq x \leq 12,$$

$$0 \leq y \leq 2,$$

where  $R_1$  and  $R_2$  are each independently, fluorine, hydrogen, alkyl having 1 to 8 carbon atoms, fluoroalkyl having 1 to 8 carbon atoms or perfluoroalkyl having 1 to 8 carbon atoms; and

wherein the substituents  $(C_nF_{2n+1-m}H_m)$  are in each case identical or different.

44. (New): A fluoroalkylphosphate salt of formula (I)



(I)

wherein

$M^{a+}$  is a monovalent, divalent or trivalent cation;

a is 1, 2 or 3;

b is 2 for a = 1,

b is 2 for a = 3, and

b is 1 for a = 2;

and, in each case, subscripts n, m, x and y satisfy the following relationships

$$1 \leq n \leq 8,$$

$$0 \leq m \leq 2 \text{ for } n = 1 \text{ or } 2,$$

$$0 \leq m \leq 4 \text{ for } 3 \leq n \leq 8,$$

$$1 \leq x \leq 12,$$

$$1 \leq y \leq 2,$$

where  $R_1$  and  $R_2$  are each independently, fluorine, hydrogen, alkyl having 1 to 8 carbon atoms, fluoroalkyl having 1 to 8 carbon atoms or perfluoroalkyl having 1 to 8 carbon atoms; and

wherein the substituents  $(C_nF_{2n+1-m}H_m)$  are in each case identical or different.

45. (New): A fluoroalkylphosphate salt of formula (I)



(I)

wherein

$M^{a+}$  is a monovalent, divalent or trivalent cation;

a is 1, 2 or 3;

b is 2 for a = 1,

b is 2 for a = 3, and

b is 1 for a = 2;

and, in each case, subscripts n, m, x and y satisfy the following relationships

$$1 \leq n \leq 8,$$

$$0 \leq m \leq 2 \text{ for } n = 1 \text{ or } 2,$$

$$0 \leq m \leq 4 \text{ for } 3 \leq n \leq 8,$$

$$1 \leq x \leq 12,$$

$$0 \leq y \leq 2,$$

where  $R_1$  and  $R_2$  are each independently, fluorine, alkyl having 1 to 8 carbon atoms, fluoroalkyl having 1 to 8 carbon atoms or perfluoroalkyl having 1 to 8 carbon atoms; and

wherein the substituents ( $C_nF_{2n+1-m}H_m$ ) are in each case identical or different.